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Docket No. 7024/SYNX/SYNX/JW

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Mail Stop Amendment  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

Re: Inventor(s): Robert B. Lowrance, Michael R. Rice, Martin R. Elliott, Jeffrey C. Hudgens and Eric A. Enghardt  
 Title: METHOD AND APPARATUS FOR UNLOADING SUBSTRATE CARRIERS FROM SUBSTRATE CARRIER TRANSPORT SYSTEM  
 Serial No.: 10/650,481  
 Filed: August 28, 2003  
 Examiner: Lowe, Michael S.  
 Group Art Unit: 3652



Transmitted herewith is:

- ☒ PTO Form 1449;  
☐ Information Disclosure Statement with forty-five cited references; and  
☒ Return Postcard.

## FEE CALCULATION

Fee Items	Claims Filed	Included With Basic Fee	Extra Claims	Fee Rate	Total
Total Claims	N/A	- 20 =	-0-	X \$50.00	\$0.00
Independent Claims	N/A	- 3 =	-0-	X \$200.00	\$0.00
Basic Filing Fee (\$300.00), Utility Search Fee (\$500.00), Utility Examination Fee (\$200.00)				\$1000.00	\$0.00
<b>TOTAL FEES</b>					<b>PAID</b>

- ☒ The Commissioner is hereby authorized to charge \$180.00 to Deposit Account No. 04-1696.  
☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 04-1696. A duplicate copy of this transmittal is enclosed.  
☒ Please address all future correspondence to:

Customer # 41161  
 Dugan & Dugan, PC  
 55 South Broadway  
 Tarrytown, NY 10591

I hereby certify that this correspondence is being deposited with the United States Postal Service as express mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Express Mail Receipt No. EV605115620USDate of Deposit: 6/20/06Signature: [Signature]

Respectfully submitted,

[Signature]  
 Brian M. Dugan  
 Registration No. 41,720  
 (914) 332-9081



Express Mail Label No. EV605115620US

PATENTS  
7024/SYNX/SYNX/JW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Robert B. Lowrance, et al.  
Serial No. : 10/650,481  
Filed : August 28, 2003  
For : METHOD AND APPARATUS FOR UNLOADING SUBSTRATE  
CARRIERS FROM SUBSTRATE CARRIER TRANSPORT  
SYSTEM  
Group Art Unit : 3652  
Customer No. : 41161  
Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. §§ 1.56 and 1.97,  
applicants wish to call the attention of the Examiner to the  
following references:

U.S. Patent No. 4,006,813, Rene Fluck

U.S. Patent No. 4,166,527, Earl F. Beezer

U.S. Patent No. 4,222,479, Dugan, et al.

U.S. Patent No. 4,294,344, Johannes D. van Maanen

U.S. Patent No. 4,538,720, Jean-Louis Limousin

5/26/2006 MAILHED1 00000053 041696 10650481

FC:1806 180.00 DA

U.S. Patent No. 4,552,261, Raudat, et al.  
U.S. Patent No. 4,584,944, Clarence A. Dehne  
U.S. Patent No. 4,653,630, Anna Bravin  
U.S. Patent No. 4,679,685, Kenji Inoko  
U.S. Patent No. 4,702,365, Chong-Il Pak  
U.S. Patent No. 4,708,727, Cardenas-Franco, et al.  
U.S. Patent No. 4,720,006, Harald Lenherr  
U.S. Patent No. 4,750,605, Brems, et al.  
U.S. Patent No. 4,852,717, Ross, et al.  
U.S. Patent No. 4,901,843, Jeffrey A. Lashyro  
U.S. Patent No. 4,921,092, Crawford, et al.  
U.S. Patent No. 5,052,544, David L. Anderson  
U.S. Patent No. 5,092,450, Schommartz, et al.  
U.S. Patent No. 5,341,915, Cordia, et al.  
U.S. Patent No. 5,560,471, Prochut, et al.  
U.S. Patent No. 5,664,254, Ohkura, et al.  
U.S. Patent No. 5,782,338, Schuster, et al.  
U.S. Patent No. 5,797,249, Thomas Patterson Hartness  
U.S. Patent No. 5,829,574, Mario DelSanto  
U.S. Patent No. 5,865,292, Aguilar, et al.  
U.S. Patent No. 5,887,701, Mario Spatafora  
U.S. Patent No. 6,209,710, Mueller, et al.  
U.S. Patent No. 6,227,346, Lecomte, et al.  
U.S. Patent No. 6,227,348, Frei, et al.

U.S. Patent No. 6,234,300, De Vos, et al.

Foreign Art Reference No. JP 02098157 A (Abstract)

Foreign Art Reference No. JP 00062949 A (Abstract)

Foreign Art Reference No. JP 00335799 A (Abstract)

Foreign Art Reference No. WO 97/09256 A1 (Abstract)

Foreign Art Reference No. WO 00/69724 A1 (WIPO)

Foreign Art Reference No. EP 0717717 B1 (EPO)

Foreign Art Reference No. EP 00735927 B1 (Abstract)

Foreign Art Reference No. EP 00912426 B1 (Abstract)

Virvalo, T.K., "Cylinder Speed Synchronization", Dec. 1978, Hydraulics and Pneumatics, Vol. 31, No. 12, pages 55-57.

Cheng, et al., "Adaptive Synchronization Control of a Robotic Manipulator Operating in an Intelligent Workcell", April 1990, IEEE Transactions on Industrial Electronics, Vol. 37, No. 2, pages 119-126.

Shih-Hung Li, et al. "An Ultrahigh Speed Assembly Robot System. Part I. Design", 1994, Proceedings 1994 Japan-U.S.A. Symposium on Flexible Automation - A Pacific Rim Conference, Vol. 2, pages 465-72.

Roberts, et al., "Feed Chute Geometry for Minimum Belt Wear", Sept. 1998, 6th International Conference on Bulk Materials Storage, Handling and Transportation, pages 153-159.

Saigo, et al., "Drive Control Systems for Processing Lines", 11/10/2000, Fuji Jiho (Fuji Electric Journal), Vol. 73, No. 11, pages 45-49, Japanese language (Abstract only).

Saigo, K., "Variable-speed Drive Systems for Industrial Plants", 11/10/2000, Fuji Jiho (Fuji Electric Journal), Vol. 73, No. 11, pages 10-14, Japanese language (Abstract only).

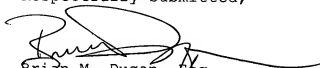
Park, et al., "Task Sequence Optimization for a Dual-Robot Assembly System using Evolutionary Algorithms", 2001, Proceedings of the Institution of Mechanical Engineers, Part B (Journal of Engineering Manufacture), Vol. 215, No. B6, pages 835-46.

Please charge deposit account No. 04-1696 in the amount of \$180.00 for consideration of this information disclosure statement under 37 C.F.R. § 1.97(c)(2).

These references are also listed on the accompanying Information Disclosure Statement (Form PTO-1449).

Consideration of the foregoing in relation to this  
patent application is respectfully requested.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'Brian M. Dugan', is written over the printed name.

Brian M. Dugan, Esq.  
Registration No. 41,720  
Dugan & Dugan, PC  
Attorneys for Applicants  
(914) 332-9081

Dated:

6/20/06  
Tarrytown, New York

U.S. Department of Commerce, Patent and Trademark Office

Docket No.:  
7024/SYNX/SYNX/JWSerial No.:  
10/650,481

## LIST OF RELEVANT ART CITED BY APPLICANT

(Use several sheets if necessary)

Applicants:  
Robert B. Lowrance, et al.Filing Date:  
August 28, 2003Group:  
3652

JUN 20 2006

## Patent Documents

*Examiner Initial		Document Number	Issue Date	Name	Class	Subclass	Filing Date If Appropriate
	US-1	4,006,813	02/08/77	Rene Fluck			
	US-2	4,166,527	09/04/79	Earl F. Beezer			
	US-3	4,222,479	09/16/80	Dugan, et al.			
	US-4	4,294,344	10/13/81	Johannes D. van Maanen			
	US-5	4,538,720	09/03/85	Jean-Louis Limousin			
	US-6	4,552,261	11/12/85	Raudat, et al.			
	US-7	4,584,944	04/29/86	Clarence A. Dehne			
	US-8	4,653,630	03/31/87	Anna Bravin			
	US-9	4,679,685	07/14/87	Kenji Inoko			
	US-10	4,702,365	10/27/87	Chong-II Pak			
	US-11	4,708,727	11/24/87	Cardenas-Franco, et al.			

## Foreign Patent Documents

## Translation

		Document Number	Date	Country	Class	Subclass	Yes	No
	F-1	JP 02098157 A	04/10/90	Japan			Abstract	
	F-2	JP 00062949 A	02/29/00	Japan			Abstract	
	F-3	JP 00335799 A	12/05/00	Japan			Abstract	
	F-4	WO 97/09256 A1	03/13/97	WIPO			Abstract	
	F-5	WO 00/69724 A1	11/23/00	WIPO			X	

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	OT-1	Virvalo, T.K., "Cylinder Speed Synchronization", Dec. 1978, Hydraulics and Pneumatics, Vol. 31, No. 12, pages 55-57.
	OT-2	Cheng, et al., "Adaptive Synchronization Control of a Robotic Manipulator Operating in an Intelligent Workcell", April 1990, IEEE Transactions on Industrial Electronics, Vol. 37, No. 2, pages 119-126.
	OT-3	Shih-Hung Li, et al. "An Ultrahigh Speed Assembly Robot System. Part I. Design", 1994, Proceedings 1994 Japan-U.S.A. Symposium on Flexible Automation - A Pacific Rim Conference, Vol. 2, pages 465-72.

Examiner \_\_\_\_\_ Date Considered \_\_\_\_\_

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office  <b>LIST OF RELEVANT ART CITED BY APPLICANT</b> (Use several sheets if necessary)	Docket No.: 7024/SYNX/SYNX/JW	Serial No.: 10/650,481
	Applicants: Robert B. Lowrance, et al.	
	Filing Date: August 28, 2003	Group: 3652

U.S. Patent Documents							
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	US-12	4,720,006	01/19/88	Harald Lenherr			
	US-13	4,750,605	06/14/88	Brems, et al.			
	US-13	4,852,717	08/01/89	Ross, et al.			
	US-15	4,901,843	02/20/90	Jeffrey A. Lashyro			
	US-16	4,921,092	05/01/90	Crawford, et al.			
	US-17	5,052,544	10/01/91	David L. Anderson			
	US-18	5,092,450	03/03/92	Schommartz, et al.			
	US-17	5,341,915	08/30/94	Cordia, et al.			
	US-20	5,560,471	10/01/96	Prochut, et al.			
	US-21	5,664,254	09/02/97	Ohkura, et al.			
	US-22	5,782,338	07/21/98	Schuster, et al.			

Foreign Patent Documents							Translation	
		Document Number	Date	Country	Class	Subclass	Yes	No
	F-6	EP 0717717 B1	07/07/99	EPO			X	
	F-7	EP 00735927 B1	11/03/99	EPO			Abstract	
	F-9	EP 00912426 B1	08/09/00	EPO			Abstract	
	F-9							
	F-10							

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	
OT-4	Roberts, et al., "Feed Chute Geometry for Minimum Belt Wear", Sept. 1998, 6th International Conference on Bulk Materials Storage, Handling and Transportation, pages 153-159.
OT-5	Saigo, et al., "Drive Control Systems for Processing Lines", 11/10/2000, Fuji Jiho (Fuji Electric Journal), Vol. 73, No. 11, pages 45-49, Japanese language (Abstract only).
OT-6	Saigo, K., "Variable-speed Drive Systems for Industrial Plants", 11/10/2000, Fuji Jiho (Fuji Electric Journal), Vol. 73, No. 11, pages 10-14, Japanese language (Abstract only).

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## U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Name	Class	Subclass	Filing Date If Appropriate
	US-23	5,797,249	08/25/98	Thomas Patterson Hartness			
	US-24	5,829,574	11/03/98	Mario DelSanto			
	US-25	5,865,292	02/02/99	Aguilar, et al.			
	US-26	5,887,701	03/30/99	Mario Spatafora			
	US-27	6,209,710	04/03/01	Mueller, et al.			
	US-28	6,227,346	05/08/01	Lecomte, et al.			
	US-29	6,227,348	05/08/01	Frei, et al.			
	US-30	6,234,300	05/22/01	De Vos, et al.			
	US-31						
	US-32						
	US-33						

## Foreign Patent Documents

## Translation

		Document Number	Date	Country	Class	Subclass	Yes	No
	F-11							
	F-12							
	F-13							
	F-14							
	F-15							

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	OT-7	Park, et al., "Task Sequence Optimization for a Dual-Robot Assembly System using Evolutionary Algorithms", 2001, Proceedings of the Institution of Mechanical Engineers, Part B (Journal of Engineering Manufacture), Vol. 215, No. B6, pages 835-46.
	OT-8	
	OT-9	

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